

**THE CANADIAN ENTOMOLOGIST**

Index to Volume 114 (1982)

**SUPPLEMENTS AND MEMOIRS**



**THE ENTOMOLOGICAL SOCIETY OF CANADA, OTTAWA**

- Allen, W.R. and Hagley, E.A.C. Evaluation of immunoelectrophoresis on cellulose polyacetate for assessing predation of Lepidoptera (Tortricidae) by Coleoptera (Carabidae) species, 1047.
- Anderson, D.W. See Elliott, R.H., 259.
- Anderson, D.W. and Elliott, R.H. Efficacy of diflubenzuron against the codling moth, *Laspeyresia pomonella* (Lepidoptera: Olethreutidae), and impact on orchard mites, 733.
- Arntfield, P.W., Gallaway, W.J., and Brust, R.A. Blood-feeding overwintering *Culex tarsalis* (Diptera: Culicidae) from Manitoba, 85.
- Ayre, G.L., Turnock, W.J., and Struble, D.L. Spatial and temporal variability in sex attractant trap catches of *Scotogramma trifolii* (Lepidoptera: Noctuidae) in relation to its biology in Manitoba, 145.
- Spatial and temporal variability in sex attractant trap catches of *Euxoa messoria* and *E. ochrogaster* (Lepidoptera: Noctuidae) in relation to their biology in Manitoba, 993.
- Bailey, T.E. and Kok, L.T. Biology of *Fruenta nundinella* (Lepidoptera: Gelechiidae) on horsenettle in Virginia, 139.
- Barber, D.R. See Hagley, E.A.C., 431.
- Barlow, C.A. See Leir, V., 897.
- Baumann, G.L. See MacCollom, G.B., 673.
- Behan-Pelletier, V.M. Descriptions of new species and a new genus of Oribatei (Acari) from the Soviet Subarctic, 855.
- Bellonck, S. See McLeod, D.G.R., 1101.
- Benjamin, D.M. See Haack, R.A., 385; Harrell, M.O., 743.
- Berbee, J.G. See Harrell, M.O., 743.
- Berisford, C.W. See Gargiullo, P.M., 531.
- Berryman, A.A. See Raffa, K.F., 97, 797.
- Bodnaryk, R.P. Abdominal bloat—an unusual symptom of synthetic pyrethroid poisoning in adults of *Mamestra configurata* (Lepidoptera: Noctuidae), 1191.
- Boiteau, G. and Singh, R.P. Effect of potato foliage infected with potato leafroll virus on fecundity and longevity of the Colorado potato beetle, *Leptinotarsa decemlineata* (Coleoptera: Chrysomelidae), 473.
- Boivin, G. and Stewart, R.K. Attraction of male green apple bugs, *Lygocoris communis* (Hemiptera: Miridae), to caged females, 765.
- Identification and evaluation of damage to McIntosh apples by phytophagous mirids (Hemiptera: Miridae) in southwestern Quebec, 1037.
- Bonenfant, C. See McLeod, D.G.R., 1101.
- Bracken, G.K. The bertha armyworm, *Mamestra configurata* (Lepidoptera: Noctuidae). Effects of dietary linolenic acid on pupal syndrome, wing syndrome, survival, and pupal fat composition, 567.
- Brown, M.W. and Cameron, E.A. Spatial distribution of adults of *Ooencyrtus kuvanae* (Hymenoptera: Encyrtidae), an egg parasite of *Lymantria dispar* (Lepidoptera: Lymantriidae), 1109.
- Brust, R.A. See Arntfield, P.W., 85; Gallaway, W.J., 1105.
- Burgess, L. Occurrence of *Phyllotreta striolata*, the striped flea beetle, in open prairie, forest, and parkland of Saskatchewan (Coleoptera: Chrysomelidae), 439.
- Occurrence of some flea beetle pests of parkland rapeseed crops in open prairie and forest in Saskatchewan (Coleoptera: Chrysomelidae), 623.
- Predation on adults of the flea beetle *Phyllotreta cruciferae* by the western damsel bug, *Nabis alternatus* (Hemiptera: Nabidae), 763.
- Burke, J. and Percy, J. Survey of pathogens in the large aspen tortrix, *Choristoneura conflictana* (Lepidoptera: Tortricidae), in Ontario and British Columbia with particular reference to granulosis virus, 457.
- Burkot, T.R. See Harrell, M.O., 743.
- Butts, R.A. See Liu, H.J., 651.
- Byers, J.R. See Lafontaine, J.D., 575.
- Byers, J.R. and Lafontaine, J.D. Biosystematics of the genus *Euxoa* (Lepidoptera: Noctuidae). XVI. Comparative biology and experimental taxonomy of four subspecies of *Euxoa comosa*, 551.
- Cameron, E.A. See Brown, M.W., 1109.
- Campbell, C.J. See Proverbs, M.D., 363.
- Campbell, J.M. *Mitosynum vockerothi*, a new genus and new species of Coleoptera (Staphylinidae: Oxytelinae) from eastern Canada, 687.
- A revision of the North American Omaliinae (Coleoptera: Staphylinidae). 3. The genus *Acidota* Stephens, 1003.
- Cannon, K.F. and Robinson, W.H. An artificial diet for the laboratory rearing of the old house borer, *Hydrotrupes bajulus* (Coleoptera: Cerambycidae), 739.
- Capinera, J.L. and Sechrist, T.S. Grasshopper (Acrididae)—Host plant associations: Response of grasshopper populations to cattle grazing intensity, 1055.
- Cheng, H.H. and Struble, D.L. Field evaluation of blacklight and sex attractant traps for monitoring seasonal distribution of the darksided cutworm (Lepidoptera: Noctuidae) in Ontario, 1121.
- Chisholm, M.D. See Struble, D.L., 359.

- Cossentine, J.E. See Lewis, L.C., 599.
- Coulson, R.N. See Wagner, T.L., 491.
- Cover, J.D. See Wagner, T.L., 491.
- Cronhardt, J.E. See Miller, J.C., 629.
- Cunningham, J.C. See Shepherd, R.F., 281.
- Dahlsten, D.L. See Swezey, S.L., 397.
- Dawson, A.F. See Harris, J.W.E., 643.
- Denning, D.G. A review of the Goeridae (Trichoptera), 637.
- Dix, M.E. and Jennings, D.T. *Rhyacionia bushnelli* (Lepidoptera: Tortricidae) damaged tips within ponderosa pine: Distribution and sampling universe, 403.
- Drooz, A.T. and Weems, M.L. Cooling eggs of *Eutrapela clemataria* (Lepidoptera: Geometridae) to  $-10^{\circ}\text{C}$  forestalls decline in parasite production with *Ooencyrtus ennemophagus* (Hymenoptera: Encyrtidae), 1195.
- Dyer, L.J., Seabrook, W.D., and Jaeger, V.A. Preparation of insect contact chemosensilla for scanning electron microscopy, 891.
- Eger, J.E., Witz, J.A., Hartstack, A.W., and Sterling, W.L. Survival of pupae of *Heliothis virescens* and *Heliothis zea* (Lepidoptera: Noctuidae) at low temperatures, 289.
- Elliott, R.H. See Anderson, D.W., 733.
- Elliott, R.H. and Anderson, D.W. Factors influencing the activity of diflubenzuron against the codling moth, *Laspeyresia pomonella* (Lepidoptera: Olethreutidae), 259.
- Elliott, R.H. and Iyer, R. Toxicity of diflubenzuron to nymphs of the migratory grasshopper, *Melanoplus sanguinipes* (Orthoptera: Acrididae), 479.
- Elliott, W.M., Richardson, J.D., and Founk, J. The age of female European corn borer moths, *Ostrinia nubilalis* (Lepidoptera: Pyralidae), in the field and tests of its use in forecasting damage to green peppers, 769.
- Fairchild, W.L. See Lewis, D.J., 699.
- Fargo, W.S. See Wagner, T.L., 491.
- Farris, S.H. See Sahota, T.S., 1179.
- Ferguson, D.C. First occurrence of *Perizoma alchemillata* (Lepidoptera: Geometridae) on the Mainland of North America, 543.
- Finnamore, D.B. See Peschken, D.P., 349.
- Follett, P.A. See Mellors, W.K., 1171.
- Founk, J. See Elliott, W.M., 769.
- Fowler, H.G. and Roberts, R.B. Carpenter ant (Hymenoptera: Formicidae) induced wind breakage in New Jersey shade trees, 649.
- Galloway, W.J. See Arntfield, P.W., 85.
- Galloway, W.J. and Brust, R.A. Blood-feeding and gonotrophic dissociation in overwintering *Anopheles earlei* (Diptera: Culicidae) from southern Manitoba, 1105.
- Galloway, T.D. and Preston, W.B. Distribution and occurrence of yellowjackets (Hymenoptera: Vespidae: *Vespa* spp.) in Manitoba, 79.
- Gargiullo, P.M. and Berisford, C.W. Number of instars of the pitch pine tip moth, *Rhyacionia rigidana* (Lepidoptera: Tortricidae: Olethreutinae), 531.
- Gilroy, N.L. See MacCollom, G.B., 673.
- Goyer, R.A. See Smith, M.T., 535.
- Gray, T.G. See Shepherd, R.F., 281.
- Greenslade, G.L. See Morris, R.F., 879.
- Gunnarson, R.D. See Lewis, L.C., 599.
- Guppy, J.C. Effects of temperature and light intensity on nocturnal activity patterns of the northern June beetle, *Phyllophaga fusca*, and the common June beetle, *P. anxia* (Coleoptera: Scarabaeidae), 1151.
- Gyriscio, G.G. See Mellors, W.K., 1171.
- Haack, R.A. and Benjamin, D.M. The biology and ecology of the twolined chestnut borer, *Agrilus bilineatus* (Coleoptera: Buprestidae), on oaks, *Quercus* spp., in Wisconsin, 385.
- Hagley, E.A.C. See Allen, W.R., 1047.
- Hagley, E.A.C., Holliday, N.J., and Barber, D.R. Laboratory studies of the food preferences of some orchard carabids (Coleoptera: Carabidae), 431.
- Hain, F.P. See Nettleton, W.A., 155; Younan, E.G., 789.
- Halteman, W.A. See Southard, S.G., 693.
- Hamilton, K.G.A. Two new species of arboricolous Typhlocybinae (Rhynchota: Homoptera: Cicadellidae), 1129.
- Taxonomic changes in *Aphrophora* (Rhynchota: Homoptera: Cercopidae), 1185.
- Hanna, M.R. See Richards, K.W., 1199.
- Harper, A.M. and Kaldy, M.S. Effect of the pea aphid, *Acyrtosiphon pisum* (Homoptera (Homoptera): Aphididae), on yield and quality of forage alfalfa, 485.

- Harper, A.M. and Lilly, C.E.** Aggregations and winter survival in southern Alberta of *Hippodamia quinquesignata* (Coleoptera: Coccinellidae), a predator of the pea aphid (Homoptera: Aphididae), 303.
- Harrell, M.O., Benjamin, D.M., Berbee, J.G., and Burkot, T.R.** Consumption and utilization of leaf tissue of tissue-cultured *Populus*  $\times$  *Euramericana* by the cottonwood leaf beetle, *Chrysomela scripta* (Coleoptera: Chrysomelidae), 743.
- Harris, C.R., Tolman, J.H., and Svec, H.J.** Onion maggot (Diptera: Anthomyiidae) resistance to some insecticides following selection with parathion or carbofuran, 681.
- Harris, C.R., Turnbull, S.A., Whistlecraft, J.W. and Surgeoner, G.A.** Multiple resistance shown by field strains of house fly, *Musca domestica* (Diptera: Muscidae), to organochlorine, organophosphorus, carbamate, and pyrethroid insecticides, 447.
- Harris, J.W.E. and Dawson, A.F.** Estimating number of western spruce budworm eggs from egg mass measurements in British Columbia, 643.
- Hartstack, A.W.** See Eger, J.E., 289.
- Hedlin, A.F., Miller, G.E., and Ruth, D.S.** Induction of prolonged diapause in *Barbara colfaxiana* (Lepidoptera: Olethreutidae): Correlations with cone crops and weather, 465.
- Herbert, H.J. and McRae, K.B.** Predicting eclosion of overwintering eggs of the European red mite, *Panonychus ulmi* (Acarina: Tetranychidae), in Nova Scotia, 703.
- Hilton, D.F.J.** The biology of *Endothenia daeckiana* (Lepidoptera: Olethreutidae), an inhabitant of the ovaries of the northern pitcher plant, *Sarracenia p. purpurea* (Sarraceniaceae), 269.
- Holliday, N.J.** See Hagley, E.A.C., 431; Richardson, R.J., 509.
- Holmberg, R.G. and Turnbull, A.L.** Selective predation in a euryphagous invertebrate predator, *Pardosa vancouveri* (Arachnida: Araneae), 243.
- Holmes, N.D.** Population dynamics of the wheat stem sawfly, *Cephus cinctus* (Hymenoptera: Cephidae), in wheat, 775.
- Houseweart, M.W.** See Kendall, D.M., 461; Southard, S.G., 693.
- Houseweart, M.W., Southard, S.G., and Jennings, D.T.** Availability and acceptability of spruce budworm eggs to parasitism by the egg parasitoid, *Trichogramma minutum* (Hymenoptera: Trichogrammatidae), 657.
- Ibaraki, A.** See Sahota, T.S., 1179.
- Ishii, K. and Yamaoka, H.** The species and number of symbiotic penicillate millipeds in arboreal ant nests, 767.
- Iyer, R.** See Elliott, R.H., 479.
- Jaeger, V.A.** See Dyer, L.J., 891.
- Jennings, D.T.** See Dix, M.E., 403; Kendall, D.M., 461; Houseweart, M.W., 657; Southard, S.G. 693.
- Johnson, T.B. and Lewis, L.C.** Pathogenicity of two nuclear polyhedrosis viruses in the black cutworm, *Agrotis ipsilon* (Lepidoptera: Noctuidae), 311.
- Jones G.S. and Thomas, H.H.** Mites, ticks, and fleas of the mice *Zapus hudsonius* and *Napaeozapus insignis* from the Maritime Provinces and Gaspé Peninsula, Quebec, Canada, 1031.
- Jullano, S.A.** Influence of host age on host acceptability and suitability for a species of *Trichogramma* (Hymenoptera: Trichogrammatidae) attacking aquatic Diptera, 713.
- Kaldy, M.S.** See Harper, A.M., 485.
- Keeley, L.L.** See Wagner, T.L., 491.
- Kelton, L.A.** Description of a new species of *Plagiognathus* Fieber, and additional records of European *Psallus salicellus* in the Nearctic Region (Heteroptera: Miridae), 169.  
New records of European *Pilophorus* and *Orthorylus* in Canada (Heteroptera: Miridae), 283.  
New records of Palearctic *Phylus* Hahn and *Plagiognathus* Fieber in North America (Heteroptera: Miridae), 1127.
- Kendall, D.M., Jennings, D.T., and Houseweart, M.W.** A large-capacity pheromone trap of spruce budworm moths (Lepidoptera: Tortricidae), 461.
- King, E.W.** See Shepard, M., 1089.
- Klimaszewski, J.** Studies of Myllaenini (Coleoptera: Staphylinidae, Aleocharinae) I. Systematics, phylogeny, and zoogeography of Nearctic *Myllaena* Erichson, 181.  
A revision of the Gymnusini and Deinopsini of the World (Coleoptera: Staphylinidae). Supplementum 2, 317.  
A redefinition of Myllaenini Ganglbauer and redescrptions of *Camacopalpus* Motschulsky and *Polypea* Fauvel (Coleoptera: Staphylinidae), 411.
- Kok, L.T.** See Bailey, T.E., 139; Sieburth, P.J., 1201.
- Kring, T.J.** See O'Dell, T.M., 751.
- Lafontaine, J.D.** See Byers, J.R., 551.
- Lafontaine, J.D.** Biogeography of the genus *Euxoa* (Lepidoptera: Noctuidae) in North America, 1.
- Lafontaine, J.D. and Byers, J.R.** A revision of the *comosa* group of the genus *Euxoa* Hbn. (Lepidoptera: Noctuidae), with descriptions of two new species, 575.
- Lalonde, R.G. and Shorthouse, J.D.** Exit strategy of *Urophora cardui* (Diptera: Tephritidae) from its gall on Canada thistle, 873.

- Lamb, R.J. and Turnock, W.J.** Economics of insecticidal control of flea beetles (Coleoptera: Chrysomelidae) attacking rape in Canada, 827.
- Langor, D.W.** See Larson, D.J., 591.
- Larson, D.J. and Langor, D.W.** The carabid beetles of insular Newfoundland (Coleoptera: Carabidae: Cincindelidae)—30 years after Lindroth, 591.
- Leir, V. and Bartow, C.A.** Effects of starvation and age on foraging efficiency and speed of consumption by larvae of a flower fly, *Syrphus corollae* (Syrphidae), 897.
- LePrince, D.J.** See Lewis, D.J., 699.
- LePrince, D.J. and Wood, D.M.** Aggregation of male acrocerids (Diptera), 991.
- Leslie, C.A. and Overhulser, D.L.** Citronello<sup>1</sup> attracts male *Prenolepis imparis* (Hymenoptera: Formicidae), 1197.
- Lewis, D.J. Fairchild, W.L., and LePrince, D.J.** Evaluation of an electronic mosquito repeller, 699.
- Lewis, L.C.** See Johnson, T.B., 311.
- Lewis, L.C., Gunnarson, R.D., and Cossentine, J.E.** Pathogenicity of *Vairimorpha necatrix* (Microsporidia: Nosematidae) against *Ostrinia nubilalis* (Lepidoptera: Pyralidae), 599.
- Liebold, A.M., Volney, W.J.A., and Schorn, H.E.** An unidentified leaf mine in fossil *Mahonia reticulata* (Berberidaceae), 455.
- Lilly, C.E.** See Harper, A.M., 303; Struble, D.L., 359.
- Linton, D.A.** See Safranyik, L., 539.
- Liu, H.J. and Butts, R.A.** *Delia* spp. (Diptera: Anthomyiidae) infesting canola in Alberta, 651.
- Longergan, G.C.** See Ross, R.J., 1143.
- Loschivao, S.R. and Sabourin, D.** The merchant grain beetle, *Oryzaephilus mercator* (Silvanidae: Coleoptera), as a household pest in Canada, 1163.
- Luck, R.F.** See Unruh, T.R., 605.
- MacCollom, G.B., Baumann, G.L., Gilroy, N.L., and Welch, J.G.** Alfalfa blotch leafminer, *Agromyza frontella* (Diptera: Agromyzidae), effects on alfalfa in Vermont, 673.
- Mackauer, M.** Fecundity and host utilization of the aphid parasite *Aphelinus semiflavus* (Hymenoptera: Aphelinidae) at two host densities, 721.
- Mackauer, M. and Sullivan, D.J.** A new species of *Praon* (Hymenoptera: Aphidiidae), parasitic on the dusky-veined walnut aphid, *Callaphis juglandis* (Homoptera: Aphididae), 1159.
- MacLeod, D.M.** See McNeil, J.N., 87.
- Madsen, B.J.** See Madsen, H.F., 1083.
- Madsen, H.F. and Madsen, B.J.** Populations of beneficial and pest arthropods in an organic and a pesticide treated apple orchard in British Columbia, 1083.
- Marshall, S.A.** A revision of the Nearctic *Leptocera* (*Thoracochaeta* Duda) (Diptera: Sphaeroceridae), 63.  
A revision of *Halidayina* Duda (Diptera: Sphaeroceridae), 841.
- Martin, J.S. and McEwen, F.L.** Frequency of mating in the onion maggot, *Hyalemya antiqua* (Diptera: Anthomyiidae), 647.
- Mastro, V.C.** See Odell, T.M., 751.
- McAlpine, J.F. and Steyskal, G.C.** A revision of *Neosilba* McAlpine with a key to the World genera of Lonchaeidae (Diptera), 105.
- McClanahan, R.J.** Susceptibility of a migratory population of the corn earworm (*Heliothis zea*) (Lepidoptera: Noctuidae) to insecticides, 1175.
- McCoy, P.** See Wraight, S.P., 55.
- McEwen, F.L.** See Martin, J.S., 647.
- McLeod, D.G.R.** See Starratt, A.N., 545.
- McLeod, D.G.R., Nagai, T., Starratt, A.N., Bonenfant, C., Rud, E.W., and Bellonck, S.** Field and laboratory evaluation of a sex attractant for the white cutworm, *Euxoa scandens* (Lepidoptera: Noctuidae), 1101.
- McNeil, J.N. and MacLeod, D.M.** Two species of fungus infecting the European skipper *Thymelicus lineola* (Lepidoptera: Hesperidae) in Quebec, 87.
- McRae, K.B.** See Herbert, H.J., 703.
- McWhorter, R.E.** See Shepard, M., 1089.
- Mellors, W.K., Follett, P.A., and Gyrisco, G.G.** Double-depth sampling for alfalfa snout beetle larvae, *Otiorynchus linguistici* (Coleoptera: Curculionidae), 1171.
- Milby, M.M.** See Nelson, R.L., 515.
- Miller, G.E.** See Hedlin, A.F., 465.
- Miller, J.C. and Cronhardt, J.E.** Life history and seasonal development of the western winter moth, *Operophtera occidentalis* (Lepidoptera: Geometridae), in western Oregon, 629.
- Molloy, D.** See Wraight, S.P., 55.
- Moore, A. and Morris, O.N.** An improved technique for dosing larvae of the spruce budworm, *Choristoneura fumiferana* (Lepidoptera: Tortricidae), with measured quantities of *Bacillus thuringiensis* var. *kurstaki*, 89.

- Morris, O.N. See Moore, A., 89.
- Morris, R.F., Greenslade, G.L., and Raske, A.G. Notes on the occurrence of the gypsy moth, *Lymantria* (= *Porthetria*) *dispar* (Lepidoptera: Lymantriidae), in Newfoundland, 879.
- Mutuura, A. *Cnephiasia stephensiana*, a species newly recorded from Canada and compared with the previously recorded *C. interjectana* (Lepidoptera: Tortricidae), 667.
- American species of *Dioryctria* (Lepidoptera: Pyralidae). VI. A new species of *Dioryctria* from eastern Canada and north-eastern United States, 1069.
- Nagai, T. See McLeod, D.G.R., 1101.
- Nelson, R.L. and Milby, M.M. Autogeny and blood-feeding by *Culex tarsalis* (Diptera: Culicidae) and the interval between oviposition and feeding, 515.
- Nettleton, W.A. and Hain, F.P. The life history, foliage damage, and control of the balsam twig aphid, *Mindarus abietinus* (Homoptera: Aphididae), in Fraser fir Christmas tree plantations of western North Carolina, 155.
- Newton, J.R. See Proverbs, M.D., 363.
- Odell, T.M., Shields, K.S., Mastro, V.C. and Kring, T.J. The epiphysis of the gypsy moth, *Lymantria dispar* (Lepidoptera: Lymantriidae): Structure and function, 751.
- Ohmart, C.P. and Voigt, W.G. Temporal and spatial arrival patterns of *Ips plastographus maritimus* (Coleoptera: Scolytidae) and its insect associates on freshly felled *Pinus radiata* in California, 337.
- Oliver, D.R. *Xylotopus*, a new genus of Orthocladinae (Diptera: Chironomidae), 167.
- Oliver, D.R. and Roussel, M.E. The larvae of *Pagastia* (Diptera: Chironomidae) with descriptions of three Nearctic species, 849.
- Overhulser, D.L. See Leslie, C.A., 1197.
- Page, M.L. See Swezey, S.L., 397.
- Palaniswamy, P. See Ross, R.J., 1143.
- Peet, F.G. See Sahota, T.S., 1179.
- Percy, J. See Burke, J., 457.
- Peschken, D.P., Finnamore, D.B., and Watson, A.K. Biocontrol of the weed Canada thistle (*Cirsium arvense*): Releases and development of the gall fly *Urophora cardui* (Diptera: Tephritidae) in Canada, 349.
- Philip, K.W. See Troubridge, J.T., 881.
- Philogène, B.J.R. Experiments with artificial light: Necessity for properly identifying the source, 377.
- Ponder, B. See Ross, R.J., 1143.
- Preston, W.B. See Galloway, T.D., 79.
- Pritchard, G. See Stewart, M., 275.
- Proverbs, M.D., Newton, J.R., and Campbell, C.J. Codling moth: A pilot program on control by sterile insect release in British Columbia, 363.
- Raffa, K.F. and Berryman, A.A. Gustatory cues in the orientation of *Dendroctonus ponderosae* (Coleoptera: Scolytidae) to host trees, 97.
- Accumulation of monoterpenes and associated volatiles following inoculation of grand fir with a fungus transmitted by the fir engraver, *Scolytus ventralis* (Coleoptera: Scolytidae), 797.
- Raske, A.G. See Morris, R.F., 879.
- Régnière, J. A process-oriented model of spruce budworm phenology (Lepidoptera: Tortricidae), 811.
- Retnakaran, A. Laboratory and field evaluation of a fast-acting insect growth regulator against the spruce budworm, *Choristoneura fumiferana* (Lepidoptera: Tortricidae), 523.
- Retnakaran, A. and Smith, L. Reproductive effects of insect growth regulators on the white pine weevil, *Pissodes strobi* (Coleoptera: Curculionidae), 381.
- Richards, K.W. and Hanna, M.R. The sainfoin seed chalcid, *Eurytoma onobrychidis* (Hymenoptera: Eurytomidae), in western Canada, 1199.
- Richardson, J.D. See Elliott, W.M., 769.
- Richardson, R.J. and Holliday, N.J. Occurrence of carabid beetles (Coleoptera: Carabidae) in a boreal forest damaged by fire, 509.
- Roberts, R.B. See Fowler, H.G., 649.
- Robertson, J.L. Effect of body weight on lethal effectiveness of a juvenile hormone analogue applied to male and female western spruce budworm (*Choristoneura occidentalis*) (Lepidoptera: Tortricidae), 1063.
- Robinson, W.H. See Cannon, K.F., 739.
- Ross, R.J., Seabrook, W.D., Lonergan, G.C., Palaniswamy, P., and Ponder, B. Effects of blends of sex pheromone isomers on mating and electroantennograms of spruce budworm (Lepidoptera: Tortricidae), 1143.
- Roussel, M.E. See Oliver, D.R., 849.
- Rud, E.W. See McLeod, D.G.R., 1101.
- Ruth, D.S. See Hedlin, A.F., 465; Sahota, T.S., 1179.
- Sabourin, D. See Loschiavo, S.R., 1163.
- Safranyik, L. and Linton, D.A. Emergence of *Dendroctonus rufipennis* (Coleoptera: Scolytidae) from buried logs, 539.

- Sahota, T.S., Ruth, D.S., Ibaraki, A., Farris, S.H., and Peet, F.G.** Diapause in the pharate adult stage of insect development, 1179.
- Sanborne, P.M.** Stridulation in *Merope tuber* (Mecoptera: Meropidae), 177.
- Ptychoneura* (Diptera) eggs on the thorax of adult *Rhopalum clavipes* (Hymenoptera: Sphecidae) in North America, 279.
- Schorn, H.E.** See Liebhold, A.M., 455.
- Scott, J.A.** See Troubridge, J.T., 881.
- Seabrook, W.D.** See Dyer, L.J., 891; Ross, R.J., 1143.
- Sears, M.K.** See Smith, D.B., 173.
- Sechrist, T.S.** See Capinera, J.L., 1055.
- Shepard, J.H.** See Troubridge, J.T., 881.
- Shepard, M., McWhorter, R.E., and King, E.W.** Life history and illustrations of *Pristhesancus papuensis* (Hemiptera: Reduviidae), 1089.
- Shepherd, R.F., Gray, T.G., and Cunningham, J.C.** Effects on nuclear polyhedrosis virus and *Bacillus thuringiensis* on western spruce budworm (Lepidoptera: Tortricidae) 1 and 2 years after aerial application, 281.
- Shields, K.S.** See Odell, T.M., 751.
- Shorthouse, J.D.** See Lalonde, R.G., 873.
- Sieburth, P.J. and Kok, L.T.** Ovipositional preference of *Trichosirocalus horridus* (Coleoptera: Curculionidae), 1201.
- Singh, R.P.** See Boiteau, G., 473.
- Smith, D.B. and Sears, M.K.** Mandibular structure and feeding habits of three morphologically similar coleopterous larvae: *Cucujus clavipes* (Cucujidae), *Dendroides canadensis* (Pyrochroidae), and *Pytho depressus* (Salpingidae), 173.
- Smith, I.M.** Larvae of water mites of the genera of the superfamily Lebertioidea (Prostigmata: Parasitengona) in North America with comments on phylogeny and higher classification of the superfamily, 901.
- Smith, L.** See Retnakaran, A., 381.
- Smith, M.T. and Goyer, R.A.** The life cycle of *Corticene glaber* (Coleoptera: Tenebrionidae), a facultative predator of the southern pine beetle, *Dendroctonus frontalis* (Coleoptera: Scolytidae), 535.
- Snyder, T.P.** Electrophoretic characterizations of black flies in the *Simulium venustum* and *Verecundum* species complexes (Diptera: Simuliidae), 503.
- Southard, S.G.** See Houseweart, M.W., 657.
- Southard, S.G., Houseweart, M.W., Jennings, D.T., and Halteman, W.A.** Size differences of laboratory reared and wild populations of *Trichogramma minutum* (Hymenoptera: Trichogrammatidae), 693.
- Spanier, O.J.** See Whitney, H.S., 1095.
- Starratt, A.N.** See McLeod, D.G.R., 1101.
- Starratt, A.N. and McLeod, D.G.R.** Monitoring fall armyworm, *Spodoptera frugiperda* (Lepidoptera: Noctuidae), moth populations in southwestern Ontario with sex pheromone traps, 545.
- Steck, W.F.** See Struble, D.L., 359.
- Sterling, W.L.** See Eger, J.E., 289.
- Stewart, M. and Pritchard, G.** Pharate phases in *Tipula paludosa* (Diptera: Tipulidae), 275.
- Stewart, R.K.** See Boivin, G., 765, 1037.
- Steyskal, G.C.** See McAlpine, J.F., 105.
- Struble, D.L.** See Ayre, G.L., 145, 993; Cheng, H.H., 1121.
- Struble, D.L., Steck, W.F., Swailes, G.E., Chisholm, M.D., Underhill, E.W., and Lilly, C.E.** Two two-component sex attractant blends for adult males of the striped cutworm, *Euxoa tessellata* (Lepidoptera: Noctuidae), 359.
- Sullivan, D.J.** See Mackauer, M., 1159.
- Surgeoner, G.A.** See Harris, C.R., 447.
- Svec, H.J.** See Harris, C.R., 681.
- Swailes, G.E.** See Struble, D.L., 359.
- Swezey, S.L., Page, M.L., and Dahlsten, D.L.** Comparative toxicity of lindane, carbaryl, and chlorpyrifos to the western pine beetle (*Dendroctonus brevicornis*) (Coleoptera: Scolytidae) and two of its predators, *Enoclerus lecontei* (Coleoptera: Cleridae) and *Tennochila chlorodia* (Coleoptera: Trogositidae), 397.
- Teskey, H.J.** A new species of the *Hybomitra sonomensis* group (Diptera: Tabanidae) with description of its immature stages, 1077.
- Thomas, H.H.** See Jones, G.S., 1031.
- Tilles, D.A. and Wood, D.L.** The influence of carpenter ant (*Camponotus modoc*) (Hymenoptera: Formicidae) attendance on the development and survival of aphids (*Cinara* spp.) (Homoptera: Aphididae) in a giant sequoia forest, 1133.
- Tolman, J.H.** See Harris, C.R., 681.
- Tomlin, A.D.** *Paupropoda* (Arthropoda: Myriapoda) do occur in Canada, 655.



- Troubridge, J.T., Philip, K.W., Scott, J.A., and Shepard, J.H.** A new species of *Oeneis* (Satyridae) from the North American arctic, 881.
- Turnbull, A.L.** See Holmberg, R.G., 243.
- Turnbull, S.A.** See Harris, C.R., 447.
- Turnock, W.J.** See Ayre, G.L., 145, 993; Lamb, R.J., 827.
- Underhill, E.W.** See Struble, D.L., 359.
- Unruh, T.R. and Luck, R.F.** Comparison of two sampling methods for the Jeffrey pine needle miner, *Coelotechnites* sp. (Lepidoptera: Gelechiidae), in southern California, 605.
- Voigt, W.G.** See Ohmart, C.P., 337.
- Volney, W.J.A.** See Liebhold, A.M., 455.
- Wagner, T.L., Fargo, W.S., Keeley, L.L., Coulson, R.N., and Cover, J.D.** Effects of sequential attack on gallery construction, oviposition, and re-emergence by *Dendroctonus frontalis* (Coleoptera: Scolytidae), 491.
- Watson, A.K.** See Peschken, D.P., 349.
- Weems, M.L.** See Drooz, A.T., 1195.
- Welch, J.G.** See MacCollom, G.B., 673.
- Weseloh, R.M.** Implications of tree microhabitat preferences of *Compsilura concinnata* (Diptera: Tachinidae) for its effectiveness as a gypsy moth parasitoid, 617.
- Whistlecraft, J.W.** See Harris, C.R., 447.
- Whitney, H.S. and Spanier, O.J.** An improved method for rearing axenic mountain pine beetles, *Dendroctonus ponderosae* (Coleoptera: Scolytidae), 1095.
- Wilson, G.G.** Effects of *Pleistophora schubergi* (Microsporidia) on the spruce budworm, *Choristoneura fumiferana* (Lepidoptera: Tortricidae), 81.
- Witz, J.A.** See Eger, J.E., 289.
- Wood, D.L.** See Tilles, D.A., 1133.
- Wood, D.M.** See Leprince, D.J., 991.
- Wraight, S.P., Molloy, D., and McCoy, P.** A comparison of laboratory and field tests of *Bacillus sphaericus* strain 1593 and *Bacillus thuringiensis* var. *israelensis* against *Aedes stimulans* larvae (Diptera: Culicidae), 55.
- Wylie, H.G.** An effect of parasitism by *Microctonus vittatae* (Hymenoptera: Braconidae) on emergence of *Phyllotreta cruciferae* and *Phyllotreta striolata* (Coleoptera: Chrysomelidae) from overwintering sites, 727.
- Yamaoka, H.** See Ishii, K., 767.
- Younan, E.G. and Hain, F.P.** Evaluation of five trap designs for sampling insects associated with severed pines, 789.



